

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1. [original] Apparatus for modulating the temperature and pressure within a body cavity by means of recirculation of a biological or biocompatible liquid within the cavity, but outside of blood vessels, which comprises:

- (a) first pump means for infusing liquid at a controlled temperature and flow rate into the cavity;
- (b) means for monitoring the temperature within the cavity;
- (c) means for monitoring the pressure within the cavity; and
- (d) second pump means for withdrawing liquid at a controlled flow rate from the cavity.

2. [original] Apparatus as claimed in claim 1, additionally comprising a dual lumen catheter insertable into said cavity, one lumen being connected to said first pump means and the second lumen being connected to said second pump means.

3. [currently amended] Apparatus as claimed in ~~claims 1 or 2~~ claim 2, comprising a further catheter insertable into said cavity to withdraw liquid from said cavity.

4. [original] Apparatus as claimed in claim 3, in which said further catheter has associated pump means to withdraw liquid from said cavity.

5. [original] Apparatus as claimed in claim 3, in which said further catheter has associated flow control means to regulate the flow of liquid from said cavity.

6. [currently amended] Apparatus as claimed in ~~any of claims 1-5~~ claim 1, including liquid storage means to receive liquid from said first pump means and to deliver liquid to said second pump means.

7. [currently amended] Apparatus as claimed in claim 6, comprising a further catheter insertable into said cavity to withdraw liquid from said cavity and in which said liquid storage means also receives liquid from said further catheter.

8. [currently amended] Apparatus as claimed in claim 6 ~~or 7~~, in which said liquid storage means includes means to oxygenate liquid.

9. [currently amended] Apparatus as claimed in ~~any of claims 7-9~~ claim 6, in which said liquid storage means includes means to adjust the pH of the liquid.

10. [currently amended] Apparatus as claimed in ~~any of claims 7-10~~ claim 6, in which said liquid storage means includes means to separate contaminants from the liquid by foam fractionation.

11. [currently amended] Apparatus as claimed in ~~any of claims 1-10~~ claim 6, additionally comprising control means for at least one said pump means to control the operation of said pump means dependant on the output of said means for monitoring pressure and temperature within the cavity.

12. [currently amended] Apparatus as claimed in ~~any of claims 6-10~~ claim 6, additionally comprising:

(a) means for monitoring liquid temperature in the liquid storage means; and

(b) means for controlling said second pump means to control the operation of said pump means responsive to the difference between the temperature monitored by the means for monitoring the temperature within the cavity and the means for monitoring the liquid temperature in the liquid storage means.

13. [currently amended] Apparatus as claimed in ~~any of claims 1-10~~ claim 1, additionally comprising means responsive to the pressure sensed by said pressure monitoring means within the cavity to control operation of said first pump means.

14. [original] A device for the continuous removal of contaminants from a biological or biocompatible liquid drawn from a body cavity which comprises:

- (a) means for withdrawing the liquid from the body cavity;
- (b) pump means for applying suction to withdraw liquid from the body cavity;
- (c) liquid storage means into which said pump means discharge liquid;
- (d) gas diffusion means to diffuse gas within such liquid into close contact with said liquid, whereby contaminants make a foam with such gas; and
- (e) means for removing the foam from the surface of the liquid.

15. [original] Apparatus as claimed in claim 14, wherein the means for removing foam from the liquid is a baffle positioned so that the foam will overflow it, and the liquid will substantially not overflow it.

16. [original] A double lumen cylindrical catheter for recirculation of liquid within a body cavity:

(a) said catheter being divided longitudinally internally into a first and a second "D"-shaped lumen;

(b) having a closed distal tip in the shape of a rounded point and one or more apertures in the sides of each of the lumens near the distal tip which allow each of said lumens to communicate with the cavity when the catheter is inserted into the cavity; and

(c) having at its proximal end, separate connecting means for each said D-shaped lumen to fluid transport means.

17. [currently amended] A catheter as claimed in ~~claim 13~~ claim 16, additionally comprising a groove on its exterior adjacent its distal end,

pressure sensing means located in said groove for sensing pressure in the cavity,

temperature sensing means located in the groove for sensing temperature in the cavity,

and means for reporting the values sensed by said pressure sensing means and said temperature sensing means to a location external to the cavity.